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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------------------------------------------------------------------------------|-------------|----------------------|----------------------------------|------------------|
| 10/612,333 | 07/02/2003 | Luan Tran | MIO 0033 | 3800 |
| 7590 | 03/22/2006 | | V2/40509.257/97- | |
| Killworth, Gottman, Hagan & Schaeff, L.L.P. One Dayton Centre, Suite 500 Dayton, OH 45402-2023 | | | EXAMINER SCHILLINGER, LAURA M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2813 | |
| DATE MAILED: 03/22/2006 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,333

Applicant(s)

TRAN, LUAN

Examiner

Laura M. Schillinger

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 10 and 14 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/3/03, 3/25/05.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Claims 10 and 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected claims, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 12/15/05.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura ('230).

Nakamura teaches the following claimed limitations as cited below:

1. A method of manufacturing a memory cell comprising an electrically conductive word line, an electrically conductive bit line, an electrical charge storage structure, a transistor structure, and a bit line contact, said method comprising the steps of:

forming said charge storage structure (13) so as to be conductively coupled to said bit line (19) via said transistor structure (7) and said bit line contact (14) (Fig.7);

forming said transistor structure(7) so as to be conductively coupled to said word line (Fig.2A (5 and 4- inherent that the gates are connected via a gate line (or word line)));

forming said bit line contact (14) by forming a conductively doped polysilicon plug within a contact hole bounded by insulating side walls (9 and 15/16) (Fig.6B); and
forming said doped polysilicon plug so as to define a substantially convex upper plug surface profile in contact with said bit line (Abs., lines: 1-5).

2. A method of manufacturing a memory cell as claimed in claim 1 wherein said insulating side wall are formed so as to comprise a first pair of opposing insulating side walls along said first dimension and a second pair of opposing insulating side walls along said second dimension (Fig.6B (9 and 15/16)).

3. A method of manufacturing a memory cell as claimed in claim 2 wherein said first pair of opposing insulating side walls are formed so as to comprise respective layer of insulating spacer material formed over a conductive line (Fig.6B (9 and 15/16)).

4. A method of manufacturing a memory cell as claimed in claim 2 wherein said second pair of opposing insulating side walls are formed so as to comprise respective layers of insulating material formed between respective contact holes (Fig.6B (9 and 15/16)).

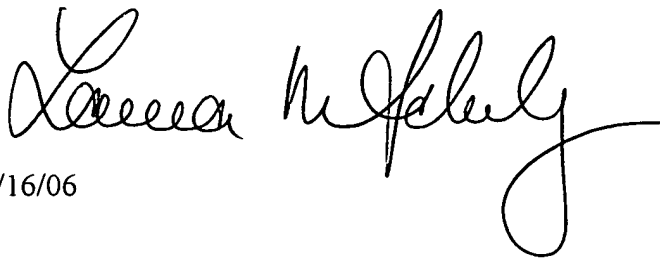
5. A method of manufacturing a memory cell as claimed in claim 1 wherein said contact hole is filled with said polysilicon plug to an uppermost extent of said insulating side walls (Fig.6B (14)).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M. Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W. Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Laura M. Schillinger', with a long, sweeping horizontal line extending from the end of the signature.

Laura M Schillinger
Primary Examiner
Art Unit 2813

03/16/06